

IOT

Hans Nilsson
IoT as part of PTC training part 1



ptc

Internet of Things, i.e. a web of accessible devices with intelligence

One market segment that will play (and already is starting to play) a big role for IoT is the medical device market.


Not only does it alleviate lots of issues and costs for established market players, such as hospital, but it also creates new market opportunities. And these new opportunities are crucial to sort out some of the challenges that the health care sector is facing:

- Rising costs
- Aging population
- Increase in chronic deceases.

- **Follow your heart with Coala**
- Coala is a unique, prize-winning, Swedish innovation for daily monitoring and analysis of your heart. A patented medical device solution to aid the early detection of heart diseases such as atrial fibrillation, and with direct connection to caregivers. It's a ground-breaking digital service open for everyone based on many years of research and development in Sweden
- It's all about prevention, detecting early signs of heart disease, alleviating worries and reducing burden on healthcare.

The Coala - a unique, intelligent device to check your heart in real-time

Connect the Coala to your smart phone and check your heart in just 60 seconds. Any time, anywhere, you are in control. No need of any electrodes attached to your chest. Based on advanced algorithms providing you with results within seconds.



Three integrated, high-performance sensors for breast and thumb-ECG recordings. Enables highly sensitive analysis of the heart's electrical functions. No separate electrodes needed.

Bluetooth wireless communication with your smart phone and the Coala App (available through App Store and Google Play)

Integrated and patented digital stethoscope to record the sounds and mechanical activities of your heart

Class IIa Medical Device approved for home use. Designed to be simple for anyone to use it, at any time.

Developed, manufactured and validated in Sweden.

Noise suppression electrode to maximize ECG performance

- The Coala consists of a unique high performance membrane that records and digitizes the sounds of your heart, and with three smart electrodes that record and analyze your heart impulses by ECG. The digital platform with 1000 Hz, 24 bit ECG-technology delivers excellent high quality ECG.
- The Coala connects via Bluetooth to your smartphone and the Coala App. All the data is stored securely in the cloud.

WHAT HAS BEEN SOLVED?



- Rising costs
 - Cost in countries like Sweden are rising (as well as in countries like the US), but as Sweden funds health care via taxes, it is important to use spend wisely, to be able to provide the best possible health care, to all and everyone, regardless. Banks have already been through this transformation, i.e. bank users do more and more of the administrative work, thus lowering costs for the bank to offer other services. Within healthcare, IoT solutions like Coala moves more of the work to the patient, thus lowering costs for the general health care system.
- Aging population
 - To live a better life longer, it's important to have tools to manage the body. Coala makes it possible to manage the heart better and thus makes it possible to live healthier even at old age.
- Increase in chronic deceases.
 - Heart problems are on the rise and to have the posibilitiy to start monitoring the state of the heart will lead to better self care and better interaction with the health care system. So Coala does not remove heart problems, but makes it easier to mange them, i.e. lowering the cost, both human and system costs.

PTC IOT SETTING



- SCP
 - Physical
 - Yes it is a handheld small device to carry with you
 - Components
 - Contains the ability to listen to your heart and to transform this data to valuable information.
 - Connectivity
 - Connects to the phone and then stores the information in the cloud, enabling services.
- New features
 - Monitor
 - Easy, available when ever, but currently not continuously.
 - Control
 - Not for this type of device, that would be more a pacemaker feature.
 - Optimize
 - Gives the owner and the caretaker team the possibility to enhance life patterns and to recommend service.
 - Automate
 - Automate the service process, i.e. enhance the process in which health care service is provided.